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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/759,082 01/12/01 KRUEGER

A P-6594-1

EXAMINER

HM12/0615

BAUER & SCHAFFER
114 OLD COUNTRY ROAD
MINEOLA NY 11501

PRICE.E

ART UNIT

PAPER NUMBER

1621

3

DATE MAILED:

06/15/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/759,082

Applicant(s)

KRUEGER ET AL.

Examiner

Elvis O. Price

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority-under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 18) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: ____.

DETAILED ACTION

Claim 1 is pending in the application.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been placed in the application file and some of the information referred to therein has been considered as to the merits. However, the other information referred to (the cited foreign patent documents) therein has not been considered because copies (preferably English equivalents of the abstracts or entire documents) have not been submitted by applicants.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Applicants appear to be preparing polyoxyalkylenated polyethers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otten et al. {U.S. Pat. 4,902,834}, in view of Lancaster et al. {U.S. Pat. 5,272,226}.

Applicants claim a method of obtaining components of a packet of additives for engine fuels by oxyalkylation of organic compounds containing hydroxyl groups. Alkyl phenols containing not more than 0.1% by mass of water and not more than 5.0% by mass of monohydroxyl alcohols is oxyalkylenated with ethylene oxide or propylene oxide up to the moment of obtaining the molecular mass of oxyalkylenated alcohol not lower than 100 daltons and the hydroxyl number not higher than 150 mg of KOH/g, and next the product of synthesis is contacted at a temperature not higher than 150⁰ C with acid ion-exchange resin in the hydrogen form, favourably with functional sulfo groups, containing at least 0.1 mole of water per 1 mole of functional groups.

Otten et al. teach a method of oxyalkylation of organic compounds containing hydroxyl groups. Alkyl phenols can be oxyalkylenated with an alkylene oxide, such as ethylene oxide or propylene oxide, in the presence of a basic catalyst at a temperature ranging from 100⁰ C to 145⁰ C (see Summary of the Invention and Col. 7, lines 8-10). The hydroxyl numbers are below 150 mg KOH/g and the molecular mass of the oxyalkylenated alcohol obtained is not lower than 100 daltons (see abstract, Col. 7, lines 40-63 and Examples 1-4). The difference between the applicants' claimed invention and the Otten et al. reference is that the reference is silent about the percentage of water and/or alcohols contained in the alkyl phenol reactant and the contacting of the oxyalkylenated product with an acid ion-exchange resin. The use of an acid ion-exchange in the hydrogen form to reduce the base concentration of the final

product would have been obvious to one of ordinary skill in the art, in the absence of any unexpected results or criticality, since acidic ion-exchange resins in the hydrogen form are known in the art as capable of neutralizing a basic solution and are easily separated from the acidified reaction mixture than acids in the free form.

The water content limitation in the alkyl phenol that is not taught by Otten et al. is accounted for by the Lancaster et al. reference. Lancaster et al. teach a method of oxyalkylenating organic compounds containing hydroxyl groups by oxyalkylenating a phenolic resin with ethylene oxide and /or propylene oxide in the presence of a basic catalyst at a temperature below 140° C. (Col. 1, lines 17-45 (step C) and Col. 2, lines 40-45). The oxyalkylation is carried out using a phenolic resin reactant which has a water content of less than 0.5% by mass (Col. 1 lines 32-33 (step A)). Lancaster et al. teach that the hydroxyl number of the reaction mixture of step C is below 170, suitably from 134-160 mg of KOH/g.

It would have been *prima facie* obvious to one of ordinary skill in the art to obtain polyoxyalkylenated products as presently claimed because Otten et al., in view of Lancaster et al., teach a method of preparing polyoxyalkylenated products using the method as presently claimed--the use of an acid ion-exchange in the hydrogen form to neutral a basic mixture is an obvious standard procedure

One of ordinary skill in the art would have been motivated to modify the invention of Otten et al., in view of Lancaster et al., by using alkyl phenols containing not more than 0.1% by mass of water to arrive at the presently claimed invention because the oxyalkylenated product of the Lancaster et al. invention is recognized as especially

good emulsifiers and demulsifiers (well suited as detergent engine fuel additives). The instantly claimed process would therefore have been obvious to one of ordinary skill in the art.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for temperatures from 80 to 150⁰ C at which the product and acid ion-exchange resin is contacted, does not reasonably provide enablement for temperatures below 80⁰ C. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. For example, the presently claimed invention in which the product is contacted with the acid ion-exchange resin could not be practice at a temperature of 0⁰ C.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is indefinite for the following reasons:

1. Applicants claimed invention appears to be a method of producing polyethers via oxyalkylenation, however, applicants recite a "method for. obtaining components of a

packet of additives for engine fuels...". This is confusing and unclear to the Examiner. Appropriate correction is required.

2. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "5.0% by mass", and the claim also recites from "0.1 to 1.0 by mass" which is the narrower statement of the range/limitation.

3. The claim is generally narrative and indefinite, failing to conform with current U.S. practice. It appears to be a literal translation into English from a foreign document and is replete with grammatical and idiomatic errors.

4. The terms "preferably" and "favourably" in claim 1 is a relative term which renders the claim indefinite. The terms "preferably" and "favourably" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite

degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

5. The phrase "not higher than 150⁰ C" in claim 1 is a relative term which renders the claim indefinite. The phrase "not higher than 150⁰ C" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

6. Applicant is reminded, in accordance with Ex parte Fressola (27 USPQ 2d 1608, BPAI 1993), that modern claim practice requires the claims to stand alone to define the invention. References in the claims to other parts of the specification are only permitted in very limited circumstances, which do not pertain to the instant situation. Thus, the instant claims are considered to be indefinite.

Claim Objections

Claim 1 is objected to because of the following informalities: The claim is not numbered and applicants have not entitled the claim heading with the required "What is claimed: or I claim: or We claim:, etc." language (see MPEP. 608.01 (m)). Appropriate correction is required.

Drawings

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing. A copy of Figure 1 is absence from the application.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvis O. Price whose telephone number is 703 605-1204. The examiner can normally be reached on 8:30 am to 5:00 pm; Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 703 308-4532. The fax phone numbers for the organization where this application or proceeding is assigned is 703 308-4556 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-1235.

Elvis O. Price, Ph.D.

June 14, 2001


Johann R. Richter, Ph.D., Esq.
Supervisory Patent Examiner
Technology Center 1600